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over *delaware*. Most of the writer's local specimens were taken at Jamesburg, N. J.

The remaining North American species of *Anatrytone* (Dyar) are, *A. arogos*, Bd. and Lec. (sometimes confused with *vitellius*, Fabr.) and *A. lagus*, W. H. Edw. *A. arogos*, also occurs locally.

Monoleuca semifascia, Walk. Dr. H. G. Dyar, in JOURNAL N. Y. ENT. SOC., XXII, 223, describes the larva of this species, and lists it as a New York insect, basing this conclusion on the Morris Plains, N. J. (Neumoegen) record,¹ and on the occurrence, at different times, of other southern species of this group, in New York State.

To the above evidence, we would like to add the following. On July 11, 1902, four specimens were taken at South Lakewood, N. J., by the writer. They were taken at night upon a screen door and were attracted by the lights of the dwelling. Two of these specimens are now in the Staten Island Museum and one in the American Museum Local Collection. We also have, in this museum, a Henry Edwards specimen, with a New York label.

For convenience we repeat the additional records in the 1909 New Jersey State List. Palisades (Joutel): Lakehurst, July 12 (Buchholz); Larva in New Jersey (Joutel).—FRANK E. WATSON.

PROCEEDINGS OF THE NEW YORK ENTOMOLOGICAL SOCIETY.

MEETING OF NOVEMBER 3, 1914.

A regular meeting of the New York Entomological Society was held November 3, 1914, at 8:15 P. M., in the American Museum of Natural History, Pres. Dr. Raymond C. Osburn in the chair, with 14 members and one visitor, Mr. M. S. Crosby, of the Linnean Society, present.

Mr. Davis spoke of his visit, October 8, with Mr. Shoemaker, to Lakehurst, N. J., and of the enthusiasm of the latter on this first visit to that locality. Notwithstanding the dry weather, the collecting was good; eight species of tiger beetles were caught, *tranquebarica*, *rugifrons*, *modesta* and *punctulata* in numbers, and one each of *generosa*, *consentanea*, *repanda* and *12-guttata*. *Sandalus niger*, differing by its conical thorax from *S. petrophya*, reported previously by Mr. Schaeffer, was taken, and constitutes, in conjunction with the specimens heretofore reported from the Palisades, an addition

¹ See Smith's Insects of New Jersey, 1899.

to the New Jersey List. The oak trees, as shown by photograph, were completely defoliated in places by the larvæ of *Anisota senatoria*, presenting the deceptive appearance of having been eaten by *Dendrotettix quercus*. Much attention was paid to sugaring and by day the sugared trees were found to be frequented by numbers of *Vespa* and *Polistes* and, attacking these, by many wheel bugs, *Arilus cristatus*. On high huckleberry bushes the "cowsheds" of the ant, *Cremastogaster lineolata pilosa*, built over coccids were observed. In the Orthoptera, the true Katy-did was found but with the song apparatus nearly worn out. Perching high in the trees these insects would be difficult to catch except for their habit of falling straight down when disturbed. The method employed in collecting was to touch the insect, when discovered at night by the aid of a lantern with a long stick or a fishing pole might be used, thus causing it to fall into the ready net. *Orchelimum minor* was detected by its short buzzing song and was also caught at sugar. *Conocephalus liristes* was heard singing in the cranberry bogs. As a sequel to the Camp at Lakehurst, Mr. Davis showed a photograph of the chestnut tree under which eighteen entomologists camped, now attacked by the chestnut blight, *Endothia parasitica*, and apparently doomed, though standing five miles from any other chestnut. Mr. Davis showed a branch injured by chafing against another through which the spores, carried doubtless by birds, as already recorded, had entered.

Mr. Davis spoke also of the *Lepidoptera*, his remarks being recorded in Miscellaneous Notes, and exhibited photographs.

Mr. Shoemaker endorsed Mr. Davis's enthusiastic comments on the excursion, stating that in three nights, sugaring about 180 noctuids, representing 35 species, and about 20 species of beetles were taken. The sugaring at night and long walks by day made it hard work, fully repaid, however, by the capture of about twelve specimens of *Homoglaea carnosa*, one at sugar, the remainder on huckleberry leaves, where the reddish color of the moth so closely resembled that of the autumn leaves as to make their discovery difficult. Mr. Shoemaker exhibited a pair of each of the species he had caught and a specimen of the southern beetle, *Cymindis elegans*, found under a stone, and previously known from New Jersey by two specimens taken at Atco by Mr. Liebeck.

Mr. Dow remarked, in a somewhat humorous way, that the enthusiasm of the Lakehurst visitors, while well founded, should not lead to the drawbacks of thirst, long tramps in the sand, and danger of losing the road being forgotten.

Mr. Davis spoke of the danger of the molasses used in sugaring becoming fermented sufficiently to cause explosion of the can and described such an incident at Lakehurst.

Dr. Forbes spoke of the interest he took in tracing the species peculiar to Lakehurst northward, mentioning in that connection the occurrence of *Prionapteryx nebulifera*, a moth whose larva constructs a tube of silk and sand at base of stalk of huckleberry bushes, on the southern shore of Massa-

chusetts. He said Cohasset, Mass., should be a specially interesting locality in that connection, for though far from thoroughly collected, it had already yielded many species not known elsewhere in the state. He also mentioned that in plants some Carolinian species had been found as far north as Bay St. George, Newfoundland, by Fernald.

Mr. Davis reminded the Society that he had recorded the finding of *Prionapteryx* at Yaphank, Long Island.

Mr. J. W. Angell exhibited a larva found in hickory and spoke of Nepperhan, near Yonkers, as a good collecting ground where he had found the larvæ of *Xyloryctes satyrus* in ash.

Mr. Woodruff recorded *Leptura exigua* found at Hewitt, N. J., June 21, on flowers of *Cornus paniculata*, as new to the New Jersey List; also *Leptinus testaceus*, a single specimen found April 27, at Bronxville, N. Y., in sifting the debris of a mouse nest at the foot of a stump; and spoke of the abundance of *Vanessa cardui* in August and September, and of finding *Euptoieta claudia* at Fox Hills, Staten Island, in September.

Mr. Leng read a letter from Mr. Harris reporting his examination of Col. Casey's collection of Cicindelidæ.

Mr. Leng spoke of *Calosoma sycophanta*, a European Carabid beetle, having been introduced successfully in eastern Massachusetts to combat the gypsy moth and called attention to the mention of this beetle at Taunton, Mass., by Mr. Easton in the bulletin issued by the New England Federation of Natural History Societies.

Mr. Hall spoke of four days spent at Aurora, W. Va., June 19 to 23, where he found *Argynnis* swarming at an elevation of about 2,800 ft. There were literally thousands of these butterflies in sight, fluttering about flowers of dogbane, *Argynnis aphrodite* outnumbered *cybele* three to one. In reply to Dr. Forbes, Mr. Hall said no *A. alceste* were observed.

Mr. Davis quoted a statement that when *Vanessa cardui* is common, other butterflies are scarce, but doubted its accuracy.

Mr. Watson said just the contrary would be nearer the truth.

Dr. Osburn exhibited Tabanidæ and Syrphidæ received from E. M. Anderson, curator of the Provincial Museum in British Columbia, partly at Atlin, 100 miles inland and near the northern boundary of the province, and spoke of their distribution, particularly of those inhabiting Europe and Asia as well as America.

A general discussion of holoarctic distribution by Messrs. Davis, Olsen and others followed Dr. Osburn's remarks.

Mr. Olsen mentioned the occurrence of the European aphid, *Callipterus betula* at Honesdale, Pa., November 23, 1913, and of the European Capsid, *Pithanus markeli* at Maspeth, Long Island.

MEETING OF NOVEMBER 17, 1914.

A regular meeting of the New York Entomological Society was held November 17, 1914, at 8:15 P. M., in the American Museum of Natural His-

tory, President Dr. Raymond C. Osburn in the chair, with thirteen members present.

Mr. Mutchler described the route followed by Mr. Watson and himself in northern Florida, leaving New York September 24, arriving in Gainesville September 26, working there with Mr. J. R. Watson, entomologist of Florida Agricultural Station, for five days; thence to Monticello for an examination of the cypress swamps, the shores of Lake Miccosukee, etc.; thence to Pensacola with a short stop at DeFuniak Springs. While in Pensacola the collecting was done principally at Fort Barrancas, reached by trolley car. On the return journey, another stop was made at DeFuniak Springs and two days were spent at Crest View, by which time, October 15, it had become cold. The *Cicindelidæ* found were exhibited and emphasis laid on the conditions under which *C. nigrrior*, hitherto unknown from Florida, was found, viz.: outside the woods and between them and the railroad track; within the woods the allied *C. unicolor* was found. Mutchler said that while 7,000 to 8,000 specimens were caught, the result was unfavorably affected by the cold weather.

Mr. Watson exhibited numerous photographs and pictures, showing the character of the environments, particularly on the road leading south from Gainesville to Payne Prairie, a flat region, formerly covered with water, and among the sinks which characterize the region. The pond east of the town, the hammock of magnolia, live oak, etc., in the University Grounds, and the road west of the town were also shown; on the latter large groups of *Pieridæ* gathered about horse dung, comprising three species, *eubele*, *nicippe*, *proterpe*.

The photographs taken at Monticello showed the detail of the cypress swamp and the arms of the lake choked with aquatic plants, as well as the rich woodlands there encountered and groves of pecan trees. In the photographs taken at Pensacola, the locality for *Cicindela unicolor* was shown, also the pines and palmettoes which are prominent in the scene. The pictures of DeFuniak Springs showed the big spring, Lake Stanley, the open pine woods, the partly cleared land with oaks, and Mr. Mutchler sifting. The environment for *Cicindela nigrrior* was shown in the Crest View photographs. Mr. Watson said the best collecting for butterflies was at Gainesville, where 58 species were taken, to which number only 12 species were added later, though he held the little sunken meadows found in the flat woods or open pine woods further north in affectionate remembrance for what they had yielded.

Mr. Mutchler spoke also of the number of *Deltochilum* taken in meat trap at Gainesville.

Dr. Forbes exhibited a number of examples of *Syntomidæ* and *Arctiidæ* and spoke of their "Local Variations in the West Indies," pointing out twenty-one instances of intimate relationship with South America, six of similar relationship between Cuba and Florida. As his remarks will be published later, they are not further reported here.

Mr. Shoemaker exhibited a new species of *Lampyridæ*, group *Lyci*, taken at Glencarlyn, near Washington, D. C., a favorite collecting place of Nathan

Banks, where a stream runs through a partly swampy area, between wooded hillsides. He also showed the drawings he had prepared to accompany the description to be printed later in the JOURNAL.

Mr. Barber said he also knew the locality and had taken a new species there.

Mr. Leng read a letter from Mr. Schwarz in which it was pointed out that while no *Silpha* or *Necrophorus* were known from the West Indies, there had been found in Porto Rico and Cuba, representatives of the smaller Silphidæ.

A letter from Mr. Dow was read correcting the paper on John Abbot of Georgia, by making it appear probable that he was in Georgia previous to 1790.

Mr. G. W. J. Angell exhibited the Nat. Geog. Mag. for July, 1914, containing a plate of Carabini experimentally introduced in Massachusetts, to combat the gypsy moth, and stated that *Calosoma sycophanta* alone had been found useful because its larva appeared to be the only one climbing the trees for larvæ.

Mr. Davis commented upon the number of adult *Calosoma frigidum* he had found climbing on Long Island.

Mr. Wintersteiner exhibited the remarkable monograph of *Microlestes* by K. Holdhaus, in which excellent figures of our species of *Blechrus*, *Dromius* and *Metabletus*, showing genitalia, are given.

MEETING OF DECEMBER 1, 1914.

A regular meeting of the New York Entomological Society was held December 1, 1914, at 8:15 P. M., in the American Museum of Natural History, President Raymond C. Osburn in the chair and eighteen members present.

Mr. H. G. Barber read a paper on "Collecting Insects in Porto Rico," while Mr. F. E. Watson showed illustrations of the places referred to. Owing to the dense population of the island, and close cultivation of the soil, collecting was confined largely to the edges of cultivated fields, along the roadsides and in and about the occasional patches of woodland. At San Juan, the Insular Fair Grounds, reached in 20 minutes, proved an excellent collecting ground, having been allowed to grow up in weeds, and an extensive tract of more or less waste land adjoining belonging to the old Porto Rican fortifications was also good. Excellent collecting was also found along the beach and among the cocoanut palms at San Turce. The mangrove swamp at Catano, reached by ferry, did not yield so much. Aibonito, at an elevation of 2,500 feet in the mountains of the interior was reached by automobile stage, and there the Borinquen hotel and the collecting proved equally satisfactory. Excellent sweeping and beating were found about the edges of the woods and in the thickets, butterflies and dragonflies were abundant; wooded hills and open fields, due to fewer people, provided better conditions than were subsequently found in any other locality. The nights in these mountains were almost chilly. At Coamo Springs, further along the same stage route, and still in the mountains, the extreme dryness and high winds oper-

ated unfavorably, though good collecting was found along the moist bank of the river, where apparently insects had congregated. The same result seemed to be indicated by the collecting in the dry bed of a stream, where the few rockbound pools and muddy spots afforded good collecting. Sifting, turning boards, etc., proved unprofitable here and elsewhere, presumably on account of the abundance of insectivorous centipedes, lizards, etc.

Leaving the mountainous interior after ten days' collecting there, the party spent a few days at Ponce, finding good collecting at a little place called Tallyboa, reached easily by train, where enormous cactus and century plants abounded. Mr. Barber pointed out that on the southern side of the island, near Ponce, the coastal plain is usually sandy with only an occasional marsh, quite different in this respect to the abundant mangrove swamps of the northern shore.

There is much cultivated land, especially sugar cane, with little other vegetation and few waste places, while the open fields and denuded hills are equally unfavorable to insects in their wind-swept dryness.

The next station, reached by railroad, was Mayaguez, where the U. S. Experiment Station was placed at the disposal of the travelers and the entomologist R. H. van Zwahlenberg pointed out good collecting places.

The results were excellent although the most ambitious excursions, climbing back into the mountains, was rather unproductive, from lack of time, for collecting purposes.

Following around the western and northern coast back to San Juan, the only stop was made at Arecibo, where again the dry season prevented the best results.

In closing, Mr. Barber spoke of the kindness of Major Dutcher and of the staff at the Porto Rican Experimental Station at Rio Piedras, near San Juan; and promised to review the scientific results of the month's work at a future meeting.

At the close of his remarks, Mr. Watson exhibited a large number of the butterflies, of which large series had been obtained and spread.

The paper was discussed by Mr. Davis, who commented on the uniformly smaller size of some species as compared with American examples, by Dr. Osburn and Messrs. Angell and Engelhardt. In reply to their questions, Mr. Barber said collecting at lights was not very satisfactory in the towns on account of interference by people.

Mr. Leng and Mr. Davis jointly described a recent visit to Ithaca, speaking of the methods used in the collections and of the large staff of entomologists there occupied in teaching and research work. The numerous ravines and waterfalls and the more northern character of the locality were shown by photographs, and Mr. Davis commented on the uniformity of the rocks as compared with the varied glacier-born rocks of Staten Island. The block system used in the collections was explained, also the tents devised by Professor Needham for environmental study. Mention was also made of the three places that had been selected for field work in the western part of

the State next season, in connection with the proposed New York State List, viz: Salamanca, Westfield and Batavia. Both speakers expressed their gratitude for their kindly reception by the members of the faculty.

Mr. Dow presented portraits donated by Dr. Walther Horn, of Berlin, of the following entomologists, viz: Roger, Westwood, Redtenbacher, Satzuma, Faust, Herrich-Schaeffer and Kiesenwetter, also a colored representation of a meeting of the Passaliden Club.

A portrait of Mr. Barber was also added to the collection.

Mr. Schaeffer spoke of an exchange of publications requested by the Hof Museum of Vienna, which on motion was referred to the publication committee.

Dr. Osburn exhibited Odonata from Atlin, B. C.; his remarks thereon will be printed in Miscellaneous Notes.

Mr. Dickerson exhibited *Colobopterus excisus* Hagen, taken at Blue Anchor, N. J., July 3. The only record in Smith's List for this species is Belmar, July, one specimen (Johnson). Mr. Schaeffer said it had however been found by Mr. Schott and Mr. Davis added the following from his collection, viz.: Lakehurst, N. J., July 9.

Mr. Dickerson also exhibited a croton bug (*Blatella germanica*) taken in Newark, the young of which had hatched while the egg mass was still partly within the body.

Mr. Davis said while it was more usual for the egg mass to be deposited before the young hatched, instances of both methods were known, in which statement he was corroborated by Mr. Schaeffer.

Colonel Casey's gift of Memoirs V was exhibited and commented upon by several members.

MEETING OF DECEMBER 15, 1914.

A regular meeting of the New York Entomological Society was held December 15, 1914, at 8:15 P. M., in the American Museum of Natural History. President Dr. Raymond C. Osburn in the chair, with ten members present.

Mr. Dow proposed Professor Nicholas E. Crosby of 62 West 56th St., New York, for active membership. On motions of Messrs. Engelhardt and Barber, the by-laws were suspended and Professor Crosby was immediately elected by an affirmative ballot cast by the secretary.

The president appointed Messrs. Davis, Sleight and Mutchler as a committee, to nominate candidates for officers for the ensuing year.

Mr. Engelhardt under the title "Entomological Excursions in the Bahamas" read a paper illustrated by about 100 lantern slides, descriptive of the islands he visited, New Providence, Andros and Abaco, their vegetation, industries, people and scenery, ending with remarkable submarine pictures of the sea bottom showing corals, seafans, fish, etc. The forests of pine on Abaco, recently commercially developed, were shown as one of the good collecting places, and the old-fashioned coral rock roads of New Providence,

with the thatch-roofed huts of the negroes half hidden in tropical vegetation as another, especially favorable for Orthoptera. The inland lakes, and the deep pools of brackish water, rising and falling with the tide, were also good, and in the latter particularly, Gyrinidæ were noted. Small sandy cays with a growth of cocoanut palms were also visited and found productive, but the beaches were clean and unproductive, as were the mangrove swamps and the seagrapes. Mr. Engelhardt exhibited a number of the insects he caught and remarked particularly on the abundance of the *Stegomyia* mosquito, and of a number of Lepidoptera which have a general distribution over sub-tropical American regions. *Papilio bonhotei*, named for Mr. L. L. Bonhote, secretary to the former governor, Sir Gilbert T. Carter, both having been ardent collectors, is the only endemic species so far known, and is at best only a varietal form of the West Indian *P. andramon*. Other typical species shown were *Danais plexippus*, *Agraulis vanillæ*, *Euptoieta hegesia*, *Phyciodes frisia*, *Anartia jatropha*, *Lycæna cassius*, *Callidryas eubele*, *Kricogonia lyside*, *Phæbis agarithe*, *Aphrissa statira*, *Pontia monuste*, *Papilio polydamas*, *Eudamus proteus*.

Large Saturniidæ were absent, but Sphingidæ were abundant and easily caught on the scarlet flowers of the Royal Poinciana, *Protoparce brontes* and *Enyo lugubris* were examples. The large noctuid, *Erebus odora*, was common, resting during the day on the sides of cliffs or walls, in caves and palm thickets, and fluttering bat-like about the lights at night. *Utetheisa bella* was conspicuous but showed little variation.

A considerable number of Coleoptera were obtained, for the most part, very like those of south Florida, but with some mixture of West Indian forms. Three species of Cicindelidæ were included but the greater number were Cerambycidæ, Scarabeidæ, Chrysomelidæ and Rhynchophora. Carabidæ were scarce, the lack of soil except in banana holes, fresh water streams, lakes and perhaps the abundance of lizards, making unfavorable conditions for ground beetles.

Hymenoptera were numerous on flowers, those of the Bougainvillea vine being conspicuous and were secured in part through the aid of a colored boy whose picture was shown.

In Diptera the housefly was a nuisance at Nassau, two species of Tabanidæ proved troublesome on the water, and the mosquitos, everywhere abundant, drove the party out to sea by their numbers on Andros Island.

Blattidæ made up a large part of the catch in Orthoptera, the season, May and June, being too early for Acridiidæ, Mantidæ, etc., to have passed beyond the nymphal stage. Two species of *Conocephalus* were taken and another heard.

In Hemiptera, several species of Lygæidæ were found on the silk cotton trees, which are common on the islands, though said that all come from one planted tree. A species of *Gerris* and a *Corixa* were often found in the native wells, which though brackish and liable to contain insects and Batrachians, are not unwholesome. One species of *Cicada*, locally called

singer, was obtained, and a curious bug was found in the caves among bats. The bottom of the caves was in many places covered with bat guano.

Four species of Odonata were collected and others were seen; three small species of Myrmeleonidae and a great abundance of Termites. Their nests were encountered everywhere, rising like huts from the ground, or forming large balls on trunks and branches of trees, no doubt accounting for the small amount of dead wood.

Mr. Engelhardt mentioned the following works on the Entomology of the Bahamas as useful, viz.:

Emily Mary Sharpe, Proc. Zool. Soc. Lond., 1900, butterflies, 29 species.

Geo. F. Hampson, Ann. Mag. Nat. Hist., VII and XIV, moths, 200-300 species.

Chas. W. Johnson, Psyche, XV, 90 sp. Diptera.

T. Horner Coffin, Rep. Balto. Geog. Soc., 15 sp. mosquitos.

W. L. Distant, Ent. Mag., XII, *Cicada bonhote*.

Albert P. Morse, Psyche, XII, Orthoptera.

Jas. A. G. Rehm, Bull. Am. Mus. Nat. Hist., XXII, 34 sp. orthoptera.

H. F. Wickham, Rep. Bahama Exp. State Univ. Iowa; Coleoptera.

Professor Wheeler's paper on ants, Bull. Am. Mus. Nat. Hist., XXI, and Mrs. Northrop's on the plants were mentioned in the discussion following Mr. Engelhardt's remarks, in which President Osburn and Messrs. Davis and Leng took part. It developed that in birds and otherwise there was a marked tendency for each island to support its own species.

Mr. Mutchler showed a specimen of the beetle *Microphthalmus debilis*, donated by Mr. H. S. Barber, of Washington, and read extracts from the paper by Mr. Barber, descriptive of its plastic larval forms and manifold reproductive habits.

Mr. Leng showed Miss Marian A. Palmer's paper on "Life History of Ladybeetles" in the current number of the Annals of the Entomological Society of America.

Mr. Wintersteiner called attention to Champion's paper in Trans. Ent. Soc. London, 1914, part I, on Malachidae and Melyridae, in which Floridian and West Indian forms are mentioned.

MEETING OF JANUARY 5, 1915.

The annual meeting of the New York Entomological Society was held at the American Museum of Natural History, on Tuesday, January 5, 1915, at 8:15 P. M. President Dr. Raymond C. Osburn in the chair, with seventeen members present, as a visitor, Mr. W. T. Bather, of the Brooklyn Entomological Society.

In the absence of the Secretary, Mr. Barber was chosen to act as secretary pro tem.

Mr. Sherman spoke of receiving sample blocks or cubes of granite by parcel post from Massachusetts with the gypsy moth inspector's name on the seal, thus showing what precautions are now being taken to prevent the spread of the gypsy moth.

Mr. Dow read a paper under the title "Fragmenta Archaica et Achaica," being extracts from "A History of Insect Observation in all Ages," of which he has furnished the following abstract: "The first was the 'Insects of the Avesta,' to which a date, 6300 B. C., is ascribed by Aristotle. The fourth thing in order of creation by the Dæmon was the wasp, sure death to cattle and fields. The others were the locust, scorpion, flies, lice and two kinds of ants. In classic Persian a tribe of Derbices is mentioned, the word meaning wasps. This throws light on the Egyptian belief that wasps' stings were fatal to cattle, and the Greek belief that human life was unsupportable north of the Black Sea on account of the great number of wasps.

Then followed an argument that the honey bee was domesticated by the Turanian long before it was known to the Iranian races, the parents of present Europeans. It was conceded prior to the Christian Era by the Egyptian scholars that the Turanian races of Scythia and Phrygia were older than themselves. The term "sweeter than honey" occurs in the first Lama of the Kalmuck, dating 80,000 years after the birth of the human race and at the time of an event comparable with the expulsion from the Garden of Eden. In subsequent discussion Dr. W. T. Forbes brought out the very important point that the medieval word "mead" is the same as the Greek "methu" or "methe," usually translated as wine but really meaning a solution of honey and water and subjected to alcoholic fermentation. Compare the present word "methyl" alcohol. This proves that although no common word for honey bee existed, the honey drink was known before the Greeks separated from the German and English peoples.

Under the subtitle of "The Sweet Singers of Pallas Athen" there was presented the classical history of the mistranslated Tettix, the Cicada; Acris, the grasshopper and Attelabus, the Cricket, the singer of sorrow. The Tettix was the sweet singer of the Gods, placed in the constellations, devoted to two great gods, bloodless, painless, eating nothing except the dew, but itself eaten in larval form by the Athenians. They were the autochthones of Attica, before the arrival of the human race. The Acris is the voracious grasshopper, which served John the Baptist for food and was eaten generally by the Greeks. They originated from a mortal who was presented with immortality but not perpetual youth, and the word is equivalent to the spindle shanks of the old man.

Various medical formulæ, dating prior to 300 B. C., were given, including pulverized tettix and bed bugs.

From the Sanscrit, possibly not later than 6000 B. C., there was described the annual festive day devoted to the flies, which were fed on flour and sweet stuff. Believers in the Sanscrit religion were forbidden to kill even the fleas and bed bugs.

Mr. Dow was asked about the kind of Orthoptera which the ancients kept in cages, and he said he presumed they were either crickets or true grasshoppers.

Mr. Bather, who has traveled in Portugal, spoke of the popularity of its

crickets, not only because of their singing quality which surpassed our native species, but also because they were supposed to bring good luck. He had seen people buying these insects in the markets, often keeping them in specially prepared cages for the purpose.

The president, Dr. Osburn, read a paper on the "Relation of Insects to other Animals," particularly to the Arthropods. Reference was made particularly to the segmentation, appendages, nervous system and circulatory system. The homologies in the different types were pointed out and diagrams representing the subject were placed upon the blackboard.

Professor Crosby referring to the statements made by J. Henri Fabre, that wasps in stinging their victims to paralyze them, always selected the position of their nervous ganglia, particularly of the head, for their deadly thrust, asked whether this was true. The question was discussed by Messrs. Schaeffer, Forbes, Dow and Barber. The opinion was generally expressed that it was not so much the exact location of the ganglia as the weak point in the armor of the insect which was selected; the ganglion above the oesophagus being located close beneath the connection between the head and thorax, where a softer tissue rendered easy the penetration of the sting.

MEETING OF JANUARY 19, 1915.

A regular meeting of the New York Entomological Society was held January 19, 1915, at 8:15 P. M., in the American Museum of Natural History, President Dr. Raymond C. Osburn in the chair, with 16 members present.

Mr. Dow reported receipt of letter from Dr. Walther Horn, in which the safety of the Wytzman plant in Belgium was stated.

Mr. Davis exhibited a copy of "The Aurelian or Natural History of English Insects" by Moses Harris, published in 1766, a large quarto with plates engraved and hand-colored by the author. Mr. Davis read several extracts referring to the title derived from a society called the Aurelians, which met when Moses Harris was a boy of 12 in the Swan Tavern in Change Alley, until the building and their collection of insects was destroyed by the fire in Cornhill; also to the style of net used, and the method of killing by pinching and thereafter stretching the specimens in the field, from which he said the English practice of setting the insects low on the pins was doubtless derived. Several passages of quaint phraseology were read, in one of which the females were designated as hens and the males as cocks.

Mr. Dow added that Moses Harris lived to see and figure in part, the collection of 11,000 specimens accumulated by Drury.

Mr. Davis, under the title "Remarks upon Some Insects Collected in the Catskills" spoke of his visit in August to Intervale, the summer home of Senator Howard R. Bayne, near East Jewett, N. Y., situated in a valley running east and west in the northern part of the Catskills Mountains. The insects shown were mostly collected in this valley and at an elevation of about 2,000 feet; the mountains surrounding the valley reach an ele-

vation of 3,900 feet, but were not visited on account of ill health at the time. Mr. Davis said it was somewhat remarkable that though he was not able to work as hard as he did in the Adirondacks, and caught fewer insects, he had already discovered among them a new species of *Atlanticus* and suspected more in other orders. He noticed that *Cicindela harrisi* replaced *C. sexguttata* completely, that *Satyrus alope* exhibited a greater range of variation than on Staten Island, and in many other respects besides those pointed out in the Orthoptera, the locality seemed possessed of a fauna more or less marked by peculiarities that deserve further study.

Mr. Dow read a paper "Fragments of Entomological History" in which he traced the entomological references in the earliest literature of the old world down to 323 B. C., when Aristotle mentioned 74 kinds of insects, including spiders, and pointed out that the first references cover mainly crop destroying and biting insects, although the honey bee and silkworm also receive early mention.

A few of the generic names now in use can be traced back to these early times, though the meaning has usually become perverted.

Mr. Watson read a paper "Some Local Lepidopterous Records" which will be printed in the JOURNAL under Miscellaneous Notes.

MEETING OF FEBRUARY 2, 1915.

A regular meeting of the New York Entomological Society was held February 2, 1915, at 8:15 A. M., in the American Museum of Natural History, President Dr. Raymond C. Osburn in the chair, and nine members present.

Dr. J. B. Knapp, of 35 West 75th St., was elected an active member.

The President called attention to a work recently issued by Comstock Publ. Co., "Handbook of Medical Entomology," by Drs. Riley and Johannsen, of Cornell University.

Mr. Bird under the title "A *Papaipema* of Metropolitan Environment" told the story of his discovery of *P. humuli*, which has been described in the Canadian Entomologist, and exhibited twelve specimens of the moth, with its pupa, larva in five stages of development, and samples of workings in the swollen stem of the hop vines. In the course of his remarks, Mr. Bird pointed out the difficulties the similarity between this and allied species, particularly *P. circumlucens* Smith, had caused previous authors, and the method he had followed of raising the specimens of both species so that all stages and food plant became known. In connection with the hop, the food plant of *P. humuli*, which by botanists has sometimes been regarded as an introduced species, though that view is discarded in the last edition of Britton & Brown, Mr. Bird said that he had found on a hop vine (*Humulus lupulus*) near his home fourteen species of insects, one a Cecidomyid, *Lasiop-tera humulicaulis*, the possibility of whose having an alternative food plant is exceedingly remote, two others of genera restricted to North America

alone, besides the *Papaipema*, which also belongs to a genus wholly North American and renowned for the discriminating manner in which its species select differing, indigenous food plants. So that the evidence of these insects is strongly in favor of the indigenous character of the food plant, for it has no near relative in the American flora, on which the insects could have subsisted prior to the time of the suspected introduction.

Mr. Leng exhibited and discussed briefly "Carabidæ collected in Northern Florida by Messrs. Mutchler and Watson," pointing out that *Cicindela nigrior*, *C. tranquebarica* var: *vulgaris minor*, and *Platynus æruginosa*, contained in the lot, were not previously known to occur in the State.

In reply to Dr. Lutz, he added that the fauna of the northern part of the state did not otherwise differ strongly in Carabidæ from the southern part.

Dr. Osburn read a paper "Notes on Species of *Eristalis*" in which he showed that the European *E. arbustorum*, probably confused heretofore by American workers with *E. meigenii*, is especially abundant near New York City, and occurs as far east as Labrador and as far west as Ohio. From the absence of specimens in the older collections examined he thought its introduction must be quite recent. The differences between this species and *meigenii* were shown by drawings of both sexes and by a long series of specimens. He also exhibited *E. rupium* Fab., another species new to North America, which had been taken at Atlin, B. C., by Mr. E. M. Anderson, of the Provincial Museum, Victoria, B. C., the past summer, and *E. latifrons* Loew, common in the western states and recently (July 15, 1908) taken at Jamaica, L. I., by Mr. Engelhardt, and at Snake Hill, N. J.

In the discussion that followed between Dr. Osburn and Messrs. Bird, Davis, Comstock and Leng, it was brought out that the separation of species by obvious color characters was frequently confirmed, if valid, by the study of more obscure parts, especially the genitalia, but that care was necessary to avoid deceptive results from faulty preparation of material of an insufficient number of examples.

Mr. Comstock mentioned the projected collecting trip to Parry Sound, of Mr. H. S. Parish, at present in Toronto, No. 81 Robert St., and advised those interested in obtaining material from that region to communicate with him.

Mr. Davis exhibited a new Cicada from California, to be called *Okana-gara rubrovenosa*.